Introduction

It is now easier than ever to customize ENERGY STAR-certified product lists to suit your program needs. If your program requires promotion of a subset of efficient models in a product category, filtered views let you seamlessly identify and display only the models that meet your criteria while enabling you to leverage the valuable ENERGY STAR brand and the validation that comes from knowing all ENERGY STAR models are third-party certified to meet performance criteria and are subject to verification testing. (To learn more about third party certification requirements visit energystar.gov/3rdpartycert)

ENERGY STAR Product Finder now has new “Advanced View” functionality offered via Socrata, an open data platform for accessing public information. In addition to filtering ENERGY STAR product lists, you can use this tool to sort and visualize data to support program development and implementation. Filtered views and visualizations may be linked to or embedded in your webpage so they are automatically updated!

Below is just a sampling of the sort features available for product categories commonly promoted by Energy Efficiency Program Sponsors*:

Sample Filters Available through ENERGY STAR Product Finder
(product attributes in development appear in italics)

<table>
<thead>
<tr>
<th>Product Category</th>
<th>Unique filters</th>
<th>Cross-cutting filters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothes washers</td>
<td>• Load configuration</td>
<td>• Brand name</td>
</tr>
<tr>
<td></td>
<td>• Connected functionality</td>
<td>• Model name, model number, additional model</td>
</tr>
<tr>
<td></td>
<td>• ENERGY STAR Most Efficient</td>
<td>information</td>
</tr>
<tr>
<td>Dishwashers</td>
<td>• US federal standard</td>
<td>• ENERGY STAR unique model identifier</td>
</tr>
<tr>
<td></td>
<td>• Water use</td>
<td>• Date qualified</td>
</tr>
<tr>
<td></td>
<td>• ENERGY STAR Most Efficient</td>
<td>• Date available on market</td>
</tr>
<tr>
<td>Refrigerators</td>
<td>• Connected functionality</td>
<td>• Markets</td>
</tr>
<tr>
<td></td>
<td>• ENERGY STAR Most Efficient</td>
<td>• Energy use</td>
</tr>
<tr>
<td>Freezers</td>
<td>• Defrost type</td>
<td>• Efficiency ratios</td>
</tr>
<tr>
<td>Room air conditioners</td>
<td>• Connected functionality</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Reverse cycle</td>
<td></td>
</tr>
<tr>
<td>Dehumidifiers</td>
<td>• Fan continuously operates</td>
<td></td>
</tr>
<tr>
<td>Light fixtures</td>
<td>Capacity</td>
<td>• Technology</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------</td>
<td>------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• CCT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Special features</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Light source Life</td>
</tr>
<tr>
<td>Light bulbs</td>
<td>Product type</td>
<td>• Technology</td>
</tr>
<tr>
<td></td>
<td>Meets ENERGY</td>
<td>• Light Output</td>
</tr>
<tr>
<td></td>
<td>STAR Most Efficient</td>
<td>• CRI</td>
</tr>
<tr>
<td>Pool pumps</td>
<td>Criteria</td>
<td>• Special features</td>
</tr>
<tr>
<td>Commercial refrigerators and freezers</td>
<td></td>
<td>• Life Rating</td>
</tr>
<tr>
<td>Commercial fryers</td>
<td></td>
<td>• WARRANTY</td>
</tr>
</tbody>
</table>
| Commercial ice makers  |                   | *Central heating and cooling products are also commonly promoted by efficiency programs; ENERGY STAR continues to work with AHRI and CEE to provide information on ENERGY STAR certified CAC/ASHP products through the CEE Directory at http://www.ceedirectory.org/.

Below we provide illustrative examples to demonstrate the new functionality and walk you through common tasks. Additional information on these new features is available at https://data.energystar.gov/videos.

**Getting Started**

In order to save or share your work, you will need to create an account at https://data.energystar.gov.

1. Click on the “Sign Up” link on the top right of the page, and follow the prompts
2. After you’ve set up your account, you will be logged in. Go to https://data.energystar.gov to return to the datasets you would like to work with.

**Creating a Filtered Dataset**

As an example of how to create a filter to show a subset of ENERGY STAR products, we will filter the residential clothes washer product list to highlight only products that have an MEF greater than 2.39 and a Water Factor less than 4.1 (CEE Tier 3). Note that filtered data views are already available for ENERGY STAR Most Efficient products.
1. Go to https://data.energystar.gov and click the link “ENERGY STAR Certified Residential Clothes Washers” (alternately use the search feature and input “clothes washer.”)

2. Once the link is open, click the Filter button in the top navigation bar.

3. A new Filter frame should appear on the right side of the screen. Click

4. Click on the down arrow next to the first attribute in the data set and scroll down to select; a new Filter frame should appear in the Filter frame.

5. Click on the down arrow next to “is” and scroll to select “greater than”.

6. In the box below, enter “2.39” and check the box to the left.

7. Repeat steps 3-6, selecting PD_ID then Water Factor as the attribute, “less than” as the condition, and inputting “4.1” as the value.

8. If you wish to Sort the data based on highest to lowest MEF, click on above the filter subsection and select Sort. Then select Modified Energy Factor as the Column with Descending as the Direction. You may also add a column if you want to apply a secondary sort for other attributes. Scroll down and click

9. You can export this data set using any of the options described in “Export Options” below or create an account to save and/or share this data view with others.
Creating Visuals
Perhaps you are planning to modify the mix of technology you promote for your residential lighting program to include more specialty bulbs and want to share background with your team about the availability of ENERGY STAR certified models by bulb type.

Number of Different ENERGY STAR Light Bulb Types
Part 1. Structure Data needed for Visual
1. Go to https://data.energystar.gov and click the link for the dataset you’re interested in using.
2. On the top of the dataset click Filter
3. Click Sort & Roll-Up

4. Click Roll-Ups & Drill-Downs
5. Group By allows comparison of items for the field selected.
   a. For example, Bulb Type.
6. Roll-Up is what you would like to count.
   a. For example, model numbers.
   b. Model numbers or PD_ID, an EPA-generated identifier, is recommended if the visualization is intended to count number of models.
7. Roll Up Function allows counting of non-numeric fields, such as Brand Name, and provides additional options for numeric fields, such as energy use per year.
8. When finished, scroll down and click

9. if you would like to come back to the filter. You can also save at any point later when creating the visualization.

Now you have a structured view of the product dataset and can proceed with creating a column chart, bar chart, pie chart, and many more visualizations.

**Number of Different ENERGY STAR Light Bulb Types**

**Part 2. Create Bar Chart**

1. On the top of the dataset click

2. In the Visualization section, click

3. In **Data Selection** click **Chart Definition**
   a. Can alphabetize and group data by clicking **Advanced Data Selection**
4. **Data Presentation** and **Chart Details** provide additional options for customizing the visual look of your graph including colors, labels and values, and several other options.

**Number of Different ENERGY STAR Light Bulb Types**

**Part 3: Create a Pie Chart**

1. On the top of the dataset click **Visualize**.
2. In the Visualization section, click **Pie**.
3. In **Data Selection**, click **Chart Definition** and select values for required fields.
   a. For example, a pie chart based on a filtering of light bulbs by bulb type, counted by model numbers.
4. **Data Presentation** and **Chart Details** provide additional options for customizing the visual look of your graph including colors, labels and values, and several other options.

You may also want to view trends associated with energy use of products by size. The following example shows how you could look at the energy use of TVs by screen size.

**Energy Use of TVs by Screen Size**

**Part 1. Structure Data needed for Visual**

1. Go to [https://data.energystar.gov](https://data.energystar.gov) and click the link for the dataset you’re interested in using.
2. On the top of the dataset click **Filter**.
3. Click **Sort & Roll-Up**.
4. Click **Group By** allows comparison of items for the field selected.
5. Select “Estimated Annual Energy Use (kWh/year)”
6. Click **Add Grouping Column** then select “Size (in.)”.
7. **Roll-Up** is what you would like to count.
   a. For example, model numbers.
   b. Model numbers or PD_ID, an EPA-generated identifier, is recommended if the visualization is intended to count number of models.
8. Roll Up Function allows counting of non-numeric fields, such as Brand Name, and provides additional options for numeric fields, such as energy use per year.
9. Click **Sort Descending**.
10. Click **Add Column** then select “Size (in.)” and direction Ascending.
11. Sorting function allows information to be more cleanly and quickly processed for displaying visuals.
12. When finished, scroll down and click **Apply**.
13. If you would like to come back to the filter. You can also save at any point later when creating the visualization.

**Energy Use of TVs by Screen Size**

**Part 2. Create Line Chart**

1. On the top of the dataset click **Visualize**.
2. In the Visualization section, click **Line**.
3. In **Data Selection** click **Chart Definition** and select values for required fields.
4. For example, a pie chart based on a filtering of televisions by estimated annual energy use, counted by model numbers.

5. Axis Options allows for adding X-axis and Y-axis labels.

6. Flyout Details allows for selecting pop-up attributes when hovering over data.

7. Data Presentation and Chart Details provide additional options for customizing the visual look of your graph including colors, labels and values, and several other options.

**Embedding Visuals in Your Application**
Once you have created and saved your visuals or filtered views, you can embed them in your application, by publishing your work using the Embed feature.

**Export Options**
You are able to export datasets and filtered data views in a number of different formats using the Export option and downloading the data. Options include CSV, JSON, PDF, RDF, RSS, XLS, XLSX, and XML.

Please note that for select datasets with greater than 65,000 rows, Socrata does not support downloading directly to xls or xlsx; however you can download these datasets as a CSV file and open using Excel with minimum loss of formatting.

Datasets are also available using the Socrata Open Data API (SODA). Further guidance on using the API is available at data.energystar.gov/api/developers.

**Contact Us**
Questions? Please email us at energystarproducts@energystar.gov